WHAT IS CLAIMED IS:

1. A cobalt compound suitable for use in an alkaline storage battery, obtained by mixing a cobalt hydroxide powder and a sodium hydroxide powder, and applying a heat treatment to the same in an atmosphere containing oxygen.

2. The cobalt compound according to claim 1, wherein the cobalt hydroxide powder is made of a solid solution of cobalt hydroxide containing at least one element selected from nickel, zinc, iron, manganese, aluminum, calcium, magnesium, strontium, barium, lithium, sodium, yttrium, and ytterbium.

3. A cobalt compound suitable for use in an alkaline storage battery, obtained by adding a sodium hydroxide aqueous solution and an aqueous solution containing an oxidizing agent to a cobalt hydroxide powder.

4. The cobalt compound according to claim 3, wherein the cobalt hydroxide powder is made of a solid solution of cobalt hydroxide containing at least one element selected from nickel, zinc, iron, manganese, aluminum, calcium, magnesium, strontium, barium, lithium, sodium, yttrium, and ytterbium.

5. The cobalt compound according to claim 3, wherein the oxidizing agent comprises at least one selected from hydrogen peroxide, bromine, chlorine, sodium hypochlorite, and persulfate.

6. A cobalt compound suitable for use in an alkaline storage battery, obtained by baking a cobalt hydroxide powder in an atmosphere containing oxygen at a temperature in a range of 90°C to 140°C.

7. The cobalt compound according to claim 6, wherein the cobalt hydroxide powder is made of a solid solution of cobalt hydroxide containing at least one element selected from nickel, zinc, iron, manganese, aluminum, calcium, magnesium, strontium, barium, lithium, sodium, yttrium, and ytterbium.

8. A method for manufacturing a cobalt compound suitable for use in an alkaline storage battery, comprising:

mixing a cobalt hydroxide powder and a sodium hydroxide powder; and

applying a heat treatment to the same in an atmosphere containing

oxygen.

9. The method according to claim 8, wherein the cobalt hydroxide powder is made of a solid solution of cobalt hydroxide containing at least one element selected from nickel, zinc, iron, manganese, aluminum, calcium, magnesium, strontium, barium, lithium, sodium, yttrium, and ytterbium.

10. A method for manufacturing a cobalt compound suitable for use in an alkaline storage battery, comprising adding a sodium hydroxide aqueous solution and an aqueous solution containing an oxidizing agent to a cobalt hydroxide powder.

11. The method according to claim 10, wherein the cobalt hydroxide powder is made of a solid solution of cobalt hydroxide containing at least one element selected from nickel, zinc, iron, manganese, aluminum, calcium, magnesium, strontium, barium, lithium, sodium, yttrium, and ytterbium.

12. The method according to claim 10, wherein the oxidizing agent comprises at least one selected from hydrogen peroxide, bromine, chlorine, sodium hypochlorite, and persulfate.

13. A method for manufacturing a cobalt compound suitable for use in an alkaline storage battery, comprising baking a cobalt hydroxide powder in an atmosphere containing oxygen at a temperature in a range of 90°C to 140°C.

14. The method according to claim 13, wherein the cobalt hydroxide powder is made of a solid solution of cobalt hydroxide containing at least one element selected from nickel, zinc, iron, manganese, aluminum, calcium, magnesium, strontium, barium, lithium, sodium, yttrium, and ytterbium.

15. A positive electrode plate suitable for use in an alkaline storage battery including an electrolytic solution, the positive electrode plate comprising a conductive support and an active material paste supported by the support,

wherein the active material paste contains nickel hydroxide, the cobalt compound according to claim 1, and a cobalt compound having a solubility in the electrolytic solution higher than a solubility of the cobalt compound according to claim 1.

16. The positive electrode plate according to claim 15, wherein the cobalt compound having a higher solubility in the electrolytic solution is at least one selected from cobalt metal, cobalt hydroxide, cobalt monoxide, and cobalt sulfate.

17. The positive electrode plate according to claim 15, wherein the cobalt compound having a higher solubility in the electrolytic solution comprises a solid solution of cobalt hydroxide containing at least one element selected from nickel, zinc, iron, manganese, aluminum, calcium, magnesium, strontium, barium, lithium, sodium, yttrium, and ytterbium.

18. A positive electrode plate suitable for use in an alkaline storage battery including an electrolytic solution, the positive electrode plate comprising a conductive support and an active material paste supported by the support,

wherein the active material paste contains nickel hydroxide, the cobalt compound according to claim 3, and a cobalt compound having a solubility in the electrolytic solution higher than a solubility of the cobalt compound according to claim 3.

19. The positive electrode plate according to claim 18, wherein the cobalt compound having a higher solubility in the electrolytic solution is at least one selected from cobalt metal, cobalt hydroxide, cobalt monoxide, and cobalt sulfate.

20. The positive electrode plate according to claim 18, wherein the cobalt compound having a higher solubility in the electrolytic solution comprises a solid solution of cobalt hydroxide containing at least one element selected from nickel, zinc, iron, manganese, aluminum, calcium, magnesium, strontium, barium, lithium, sodium, yttrium, and ytterbium.

21. A positive electrode plate suitable for use in an alkaline storage battery including an electrolytic solution, the positive electrode plate comprising a conductive support and an active material paste supported by the support,

wherein the active material paste contains nickel hydroxide, the cobalt compound according to claim 6, and a cobalt compound having a higher solubility in the electrolytic solution than a solubility of the cobalt compound

according to claim 6.

22. The positive electrode plate according to claim 21, wherein the cobalt compound having a higher solubility in the electrolytic solution is at least one selected from cobalt metal, cobalt hydroxide, cobalt monoxide, and cobalt sulfate.

23. The positive electrode plate according to claim 21, wherein the cobalt compound having a higher solubility in the electrolytic solution comprises a solid solution of cobalt hydroxide and at least one element selected from nickel, zinc, iron, manganese, aluminum, calcium, magnesium, strontium, barium, lithium, sodium, yttrium, and ytterbium.